

REMARKS

INTRODUCTION

In accordance with the foregoing, no claims have been amended. Claims 23-31 are pending and under consideration.

CLAIM REJECTIONS

Claims 23-31 were rejected under 35 USC 103(a) as being unpatentable over Akiyama (US 5,872,635) (hereinafter "Akiyama") in view of Konno et al. (US 6,885,472) (hereinafter "Konno").

Claims 23-26

Claim 23 recites: "...a video unit including a microprocessor to execute software instructions to generate image data based on print data; an engine control unit embodied as an application specific integrated circuit (ASIC) configured to receive operation state information relating to operational states of the engine mechanism, the engine control unit including a memory to store the operation state information received from the engine mechanism... wherein the microprocessor of the video unit generates and transmits instruction commands to the engine control unit... wherein the video unit and the engine control unit are arranged on a single printed circuit board (PCB)."

The Office Action relies on the printer controller 26 including CPU 16 to show the video unit including a microprocessor recited in claim 23. The Office Action relies on the engine controller 25a of Akiyama to show the engine control unit recited in claim 23.

However, the Office Action notes that the engine controller 25a of Akiyama does not include a memory to store the operation state information received from the engine mechanism, and Akiyama also does not discuss that the video unit and the engine control unit are arranged on a single PCB. Instead, the Office Action relies on Konno to show these features of claim 23. Specifically, the Office Action relies on the application specific integrated circuit (ASIC) E1006 which is controlled by CPU E1001 shown in Figure 8 of Konno to teach the feature of claim 23 where the video unit and the engine control unit are arranged on a single PCB.

In contrast to the Examiner's assertions, it is respectfully submitted that the CPU E1001 illustrated in Figure 8 of Konno is different from the microprocessor of the present invention as recited in claim 23, which executes software instructions to generate image data based on printing data.

More specifically, the CPU E1001 in Figure 8 of Konno performs an engine controlling operation, and the main PCB E0014 in Figure 8 of Konno performs the same operation as that of the engine control unit 25a of cited reference Akiyama.

Therefore, it is respectfully submitted that the feature of the present invention as recited in claim 23 where the video unit and the engine control unit are arranged on a single printed board (PCB) is not taught or suggested by Konno alone or by a combination of Konno and Akiyama.

Further, since it is obvious that a CPU for controlling the video unit and another CPU for controlling the engine control unit are provided separately based on the combination of Konno and Akiyama, it is difficult to derive the feature of the present invention that a single microprocessor controls both the video unit and the engine control unit, even if Konno and Akiyama are combined.

To strengthen this argument, it is noted that it is well settled, including post-KSR, that there is no suggestion to modify the prior art that used a plurality of devices to arrive at an invention that only used one device. See *In re Kotzab*, 217 F.3d 1365, 55 USPQ2d 1313 (Fed. Cir. 2000). Such is on point in the present invention as recited in claim 23, as claim 23 recites that the microprocessor of the video unit generates and transmits instruction commands to the engine control unit, whereas both of the relied upon references require a CPU for controlling the video unit and another CPU for controlling the engine control unit.

This technical feature of claim 23 provides that by driving the image forming apparatus with a single processor, the system design is simpler, and thus it is easier to diagnose or recover the system in the event of error, while it is also easy to embody the firmware for system control, which is a technical feature not realized, or even discussed, in the relied upon references.

Claims 24-26 depend on claim 23 and are therefore believed to be allowable for at least the foregoing reason.

Withdrawal of the foregoing rejections is requested.

Claims 27-31

Amended claim 27 recites: "...wherein the video unit and the engine control unit are arranged on a single printed circuit board (PCB)."

Similar to the argument for claim 27, it is respectfully submitted that neither of Akiyama and Konno discuss the above-noted feature of claim 27, taken alone or in combination.

Claims 28-31 depend on claim 27 and are therefore believed to be allowable for at least the foregoing reason.

Withdrawal of the foregoing rejections is requested.

CONCLUSION

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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